## VSB TRANSMITTER USING LOCKED FILTER

## Abstract of the Disclosure

Systems and methods for generating spectrally efficient modulated optical signals are provided. Capacity of WDM optical communication links may be increased dramatically without changing the WDM channel plan thus minimizing modifications to optical amplifiers and passive optical components. A vestigial sideband (VSB) optical signal may be generated by filtering an amplitude modulated (AM) signal using a filter having a center frequency locked to the transmission frequency of a laser.